Amendments to the Specification

Please amend the title as follows:

~~TOP LAYERS OF METAL FOR HIGH PERFORMANCE IC'S~~ POST PASSIVATION STRUCTURE FOR SEMICONDUCTOR CHIP OR WAFER

Please amend the second full paragraph on page 14 as follows:

Referring now to Figs. 17-21, polymer 214 is deposited and patterned to create interconnecting line opening 215, for the purposes of interconnecting two or more contact points 6 of the fine-line metallization system, using a single damascene method. In a similar manner as previously described, an adhesion layer and electroplating seed layer 216 are sputtered. Metal 218 is electroplated to fill line opening 215, and then planarized back, as shown in Figs. 18-20. Thus thick interconnecting metal line 221 is formed, connecting two or more contact points ~~5~~6, and having all the advantages of the invention herein described – thick, wide metal having low resistance and capacitance, and other advantages to be further described below.

Please amend the last paragraph on page 16 as follows:

An alternative to using the above-described damascene techniques for metallization of the top metal system of the invention is to use a metal deposition and etch, as shown in Figs.

29-35. In one embodiment, pure aluminum Al is blanket sputtered and patterned~~, as is known in the art,~~ to form vias and interconnecting lines. Patterning can be by dry or wet etching. Copper Cu, nickel Ni, or gold Au may also be blanket sputtered instead of aluminum Al, using an underlayer of titanium (Ti), titanium tungsten (TiW) or chromium (Cr) (as an adhesion and barrier layer), and then patterned by wet etching. The detailed process is shown starting in Fig. 30, in which the adhesion layer 300 is sputtered into via 7 and 7', to contact the pad 6, and covers (optional) polymer layer 5. In Fig. 30, the bulk metal 302 (Au, Cu or Ni) is sputtered over the adhesion layer (or in the case of Al, blanket sputtering is used without the adhesion layer), to fill vias 7 and 7' and to a thickness sufficient to form metal interconnecting lines, between 2 and 100 microns.

Please amend the first paragraph on page 17 as follows:

As shown in Fig. 32, photoresist 304 is next deposited and patterned to allow for etching of the bulk metal 302~~interconnecting lines of the invention, 306~~, as shown in Fig. 33. Etching of the bulk metal 302 and underlying adhesion layer 300 can be performed by dry or wet etching~~, as is known in the art~~. Referring to Fig. 34, the photoresist 304 is stripped. Subsequent metal layers may be formed in a similar manner to that shown for the first metal layer in Figs. 30-34. For example, referring to Fig. 35, another thick polymer layer 308 is deposited over the interconnect line 306 and an opening 310 formed for connection of the next metal layer to the first metal layer. Adhesion and bulk metal layers are then sputtered as described above, a photoresist deposited and patterned, metal etching performed, etc.

Please amend the first full paragraph on page 18 as follows:

The following comments relate to the size and the number of the contact points 6, Fig. 1. Because these contact points 6 are located on top of a thin dielectric (layer 3, Fig. 1) the pad size cannot be too large since a large pad size brings with it a large capacitance. In addition, a large pad size will interfere with the routing capability of that layer of metal. It is therefore preferred to keep the size of the pad 6 small. The size of pad 6 is however also directly related with the aspect ratio of via 7. An aspect ratio of about 5 is acceptable for the consideration of via etching and via filling. Based on these considerations, the size of the contact pad 6 can be in the order of 0.5 um. to 3 um. the exact size being dependent on the thickness of layers 4 and 5. The contact points 6 can comprise any appropriate contact material, such as but not limited to tungsten, copper (electroplated or electroless), chromium, aluminum, polysilicon, or the like.